June 5, 1934. J. SCHADE 1,961,985

PAPER FASTENER

Filed Aug. 18, 1933

Fig. 1.

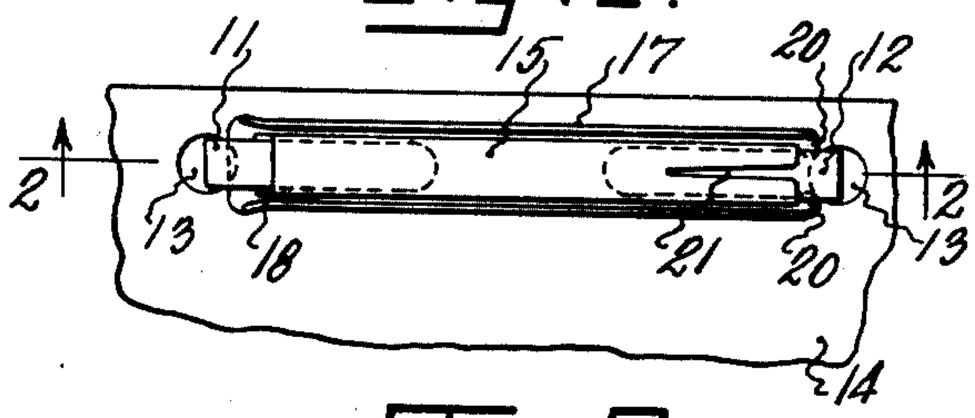


Fig. 3.

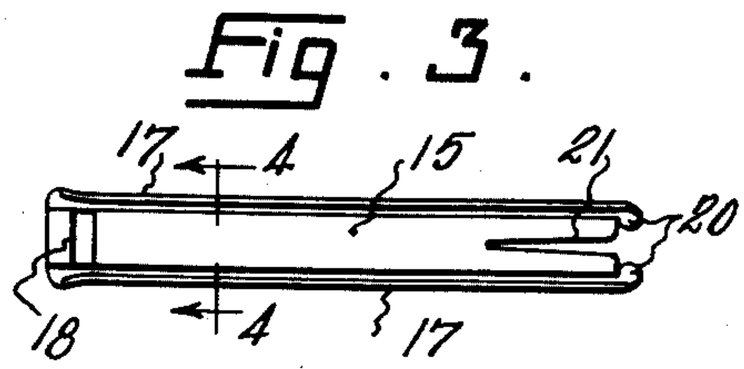


Fig. 2.

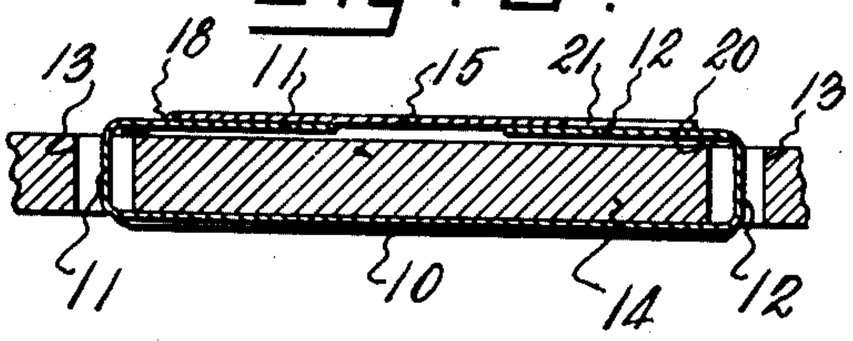


Fig. 4.

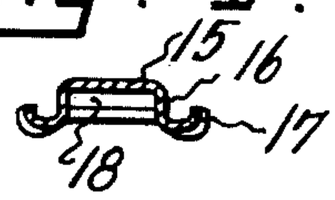


Fig. 5.

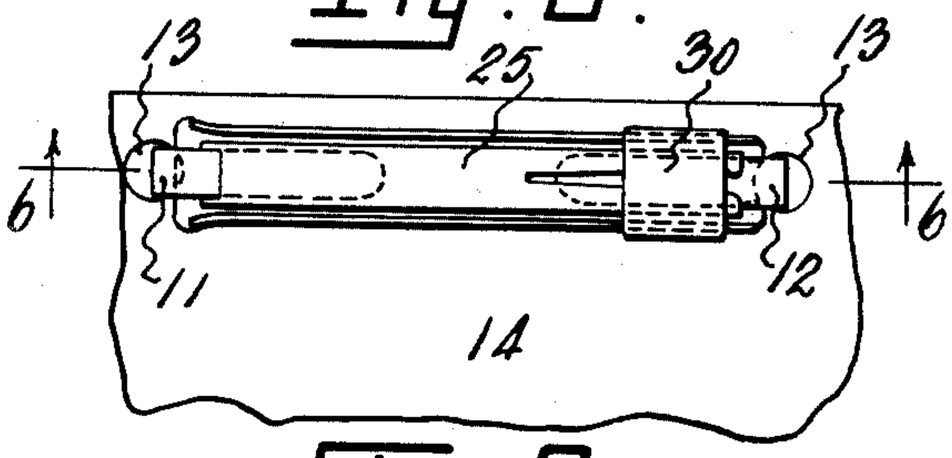


Fig. 8.

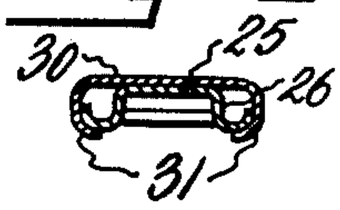


Fig. 6.

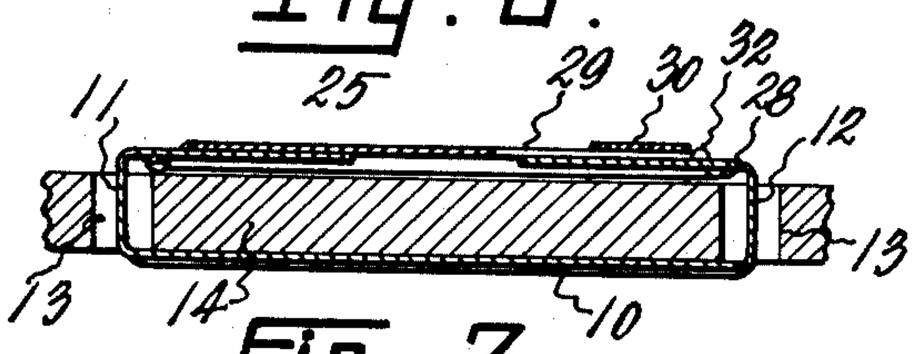


Fig. 10.

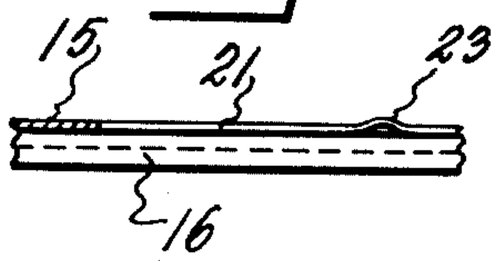


Fig. 7.

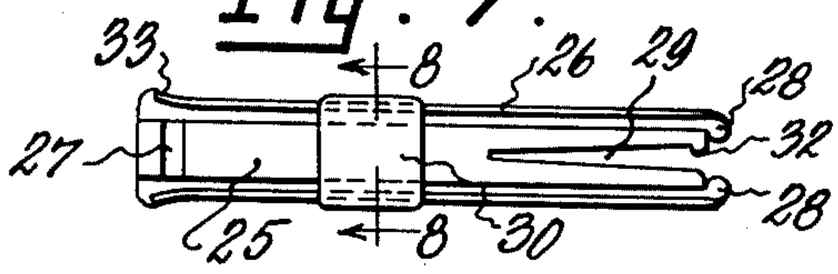


Fig. 11

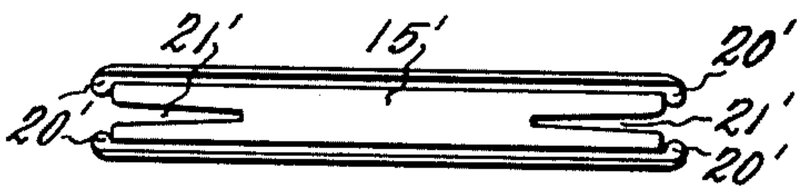


Fig. 9.

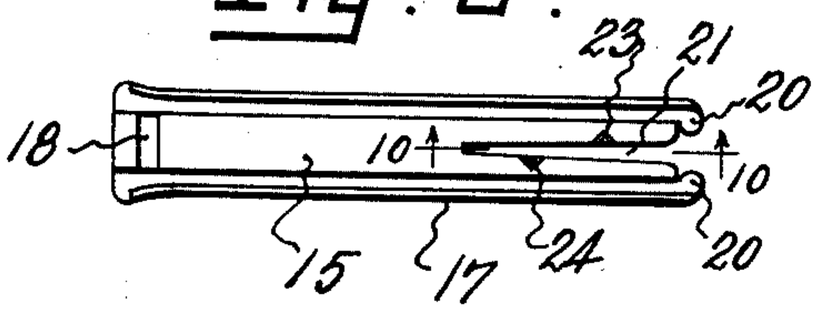
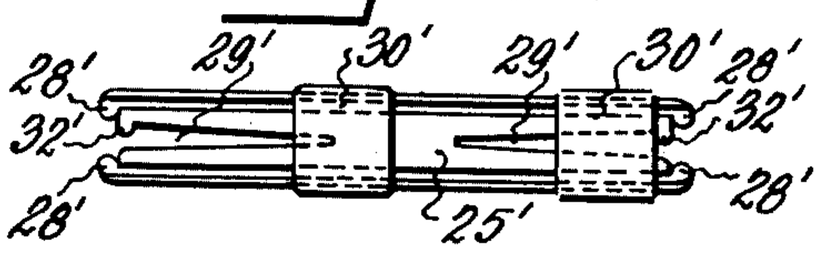


Fig. 12.



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1,961,985

PAPER FASTENER

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Application August 18, 1933, Serial No. 685,676

8 Claims. (Cl. 24—153)

This invention relates to improvements in paper fasteners of the type having a back member with a pair of prongs adapted to be passed through holes in a stack of papers, then bent over toward each other, and finally secured together by a top piece having engagement with both prongs. In one common type of paper fastener of this generic class the prongs are located on the upper side of the top member when the fastener is assembled; either being left free or being held by some slider arrangement. It has been proposed to vary this type of construction by having the top piece engage one of the prongs by means of a slot and to provide some mechanism by which the second end of the top piece will engage the second prong to hold both prongs in the rear of the top piece out of sight and in a position where they cannot catch on other articles. Such a fastener, for example, is shown in the Washburne Patent No. 1,094,951, April 28, 1914. The present invention is directed to improvements upon fasteners of what may be termed the Washburne type so that the ultimate assembly of the fastener may be neater and more permanent. The device is likewise capable of quicker assembly and the parts of the fastener may be made by relatively inexpensive modes of manufacture.

While the invention may be embodied in several specific forms, three modifications have been chosen for illustration in the accompanying drawing as best illustrating the method commercially practiced.

Referring to the drawing,

Fig. 1 is a top plan view of one form of my improved fastener shown in its assembled condition;

Fig. 2 is a section thereof on line 2—2 of Fig. 1;

Fig. 3 is a top plan view of the upper member of the fastener;

Fig. 4 is a section on line 4—4 of Fig. 3;

Fig. 5 is a plan view similar to Fig. 1 illustrating a modification of the invention;

Fig. 6 is a section on line 6—6 of Fig. 5;

Fig. 7 is a plan view showing the top member of the fastener of Fig. 5 detached and with the slide shown in a different position;

Fig. 8 is a section on line 8—8 of Fig. 7;

Fig. 9 is a detail similar to Fig. 3 showing a third form of construction;

Fig. 10 is a detail on an enlarged scale taken on line 10—10 of Fig. 9;

Fig. 11 is a view corresponding to Fig. 3 showing a further modification; and

Fig. 12 is a similar modification of the structure shown in Fig. 7.

Common to all the types of fasteners to be described below is the usual plate-like back member 10 having prongs 11 and 12 adapted to be passed through holes 13 in the paper stack 14 and then bent over flat against the surface of this stack. Cooperating with this bottom member 10 in the modification of Fig. 1 to Fig. 4 is a second plate-like top member 15 having channeled sides 16 provided with rolled edges 17 so that they present a smooth bearing surface. The space between the sides 16 is adapted to receive the prongs 11 and 12 of the bottom member as is clearly shown in Fig. 2. The prong 11 enters this channel space through a slot 18 formed in a downwardly sloping portion of the top plate which terminates the channel. The sides of the member 15 at the end remote from the slot 18 are formed with opposed lips 20 separated by a longitudinal slit 21. This slit gives a certain resilience to the end of the member 15 and permits the lips 20, which normally are spaced together closer than the width of the prong 12, to be separated sufficiently to snap them over the prong into the position of Fig. 1.

In using this type of fastener the prongs 11 and 12 are first inserted through the holes 13 and the member 15 put in place as shown, with the slot 18 fitting over the prong 11. This may conveniently be done before the prong has been fully bent into the flat position of Fig. 2. As the member 15 is then pushed down upon the surface of the paper stack the prong 11 will be bent into place and at the same time the second end of the member 15 will be brought adjacent the previously bent-over prong 12. A slight downward pressure will be sufficient to cause the lips 20 to snap over the edges of the prong 12, the resilience of the end portion of the member 15 due to the slit 21 permitting this. This action may be made easier by giving the bottom of the lips a slight inward and upward inclination, but even without any inclination of the bottoms of these lips one of them can be easily forced underneath the prong 12, so as to hold the member 15 temporarily in position until the second member can likewise be sprung underneath. When once assembled the ends of the prongs are concealed by the member 15 and a very neat assemblage is produced.

When it is desired to remove the member 15 the lips 20 can be forced apart by a paper knife or other tool forced into the slot 21, permitting the end of the member 15 to be raised in order to bring the lips above the surface of prong 12. In Figs. 9

and 10 a slightly changed construction has been shown so that a coin may be used to spread the lips apart. In this case a pair of ears 23 and 24 are bent upwardly at longitudinally spaced intervals upon opposite sides of the slot 21. By placing a coin between these and rotating it counterclockwise as viewed in Fig. 9 the lips 20 can readily be spread.

In Figs. 5 to 8 inclusive another form of the invention has been shown, generally similar to that above described except that the initial position of the lips is such that they are spaced apart a distance greater than the width of the prong and they are held together by a slide when the fastener is assembled. The member 10 and the prongs attached to it are shown unchanged in these views. A top member 25 has channeled sides 26 similar to those possessed by the member 15 and one end of the member is provided with a slot 27 adapted to fit over the prong 11 in a manner similar to slot 18. The second end of the member 25 is provided with spaced lips 28, which may be, if desired, merely continuations of the channeled sides 26, and with a longitudinal slit 29 giving lateral resiliency to this end of the member. The normal spacing of the lips 28 is preferably greater than the width of the prong 12 although the devices can be separated with practically equal facility if the spacing is smaller. In the latter case the lips are snapped on in a manner similar to that employed in the first form of the invention and the slider serves merely as a securing agent. As preferably constructed, however, the lips are formed as shown, and the prongs have a normal spacing so that unless constricted by the slider they will pass easily over the member 12. The slider 30 is bent around the member 25 as best shown in Fig. 8, having inturned sides which hold it from coming off and still permit its being moved longitudinally upon the member. The slider can be retained by a lip 32 at one end struck up from the material adjacent the open end of the slit 29 and by a widened portion 33 of the member 25 at its other end. It will be seen that with the slider in the position of Fig. 7 the lips 28 are unrestrained, while with the slider moved to the position of Fig. 5 the lips will be held firmly underneath the prong 12.

Various additional modifications of the invention may be made as required by specific problems of manufacture or utility without departing from the spirit of the invention as described in the following claims. For example, the structure shown in Fig. 1 may in some cases be modified by omitting the slot 18 and having the lips 20 at both ends as shown in Fig. 11. In such a case both ends of the plate 15 are put into locking position in the same way as described for the right-hand end in Fig. 1. To avoid confusion the parts in Fig. 11 are indicated by primed numerals. It is obvious that a similar modification may be made in the form shown in Fig. 5, two sliders being required in this case, as indicated by primed numerals in Fig. 12.

I claim:—

1. A paper fastener comprising a plate-like member having prongs which may be passed through holes in a stack of sheets and then bent over upon the face of the stack, and a second plate-like member having a slot adjacent one end so that it may be slipped over one of the prongs and a pair of opposed lips at the other end adapted to underlie the second prong, the second plate-like member being longitudinally slit between the lips to permit their spreading over the prong.

2. A paper fastener comprising a plate-like member having prongs which may be passed through holes in a stack of sheets and then bent over upon the face of the stack, and a second plate-like member having a slot adjacent one end so that it may be slipped over one of the prongs and a pair of opposed lips at the other end adapted to underlie the second prong, the second plate-like member being longitudinally slit between the lips to permit their spreading over the prong, and being longitudinally channeled on its side adjacent the bent-over portions of the prongs to receive said portions and prevent their lateral displacement.

3. A paper fastener comprising a plate-like member having prongs which may be passed through holes in a stack of sheets and then bent over upon the face of the stack, and a second plate-like member having a slot adjacent one end so that it may be slipped over one of the prongs and a pair of opposed lips at the other end adapted to underlie the second prong, the second plate-like member being longitudinally slit between the lips to permit their spreading over the prong, and being of a normal width such that the lips can be sprung over the prong only by separating them against the normal spring of the member.

4. A paper fastener comprising a plate-like member having prongs which may be passed through holes in a stack of sheets and then bent over upon the face of the stack, a second plate-like member having a slot adjacent one end so that it may be slipped over one of the prongs and a pair of opposed lips at the other end adapted to underlie the second prong, the second plate-like member being longitudinally slit between the lips to permit their spreading over the prong, and being of a normal width such that the lips can be sprung over the prong only by separating them against the normal spring of the member, and a pair of longitudinally spaced ears on opposite sides of the slit permitting separation of the ears against the spring pressure of the member by insertion and twisting of a coin between said ears.

5. A paper fastener comprising a plate-like member having prongs which may be passed through holes in a stack of sheets and then bent over upon the face of the stack, a second plate-like member having a slot adjacent one end so that it may be slipped over one of the prongs and a pair of opposed lips at the other end adapted to underlie the second prong, the second plate-like member being longitudinally slit between the lips to permit their spreading over the prong, and a slider slidable over the second plate-like member to hold said lips in engagement with the under side of the prong.

6. A paper fastener comprising a plate-like member having prongs which may be passed through holes in a stack of sheets and then bent over upon the face of the stack, a second plate-like member having a slot adjacent one end so that it may be slipped over one of the prongs and a pair of opposed lips at the other end adapted to underlie the second prong, the second plate-like member being longitudinally slit between the lips to permit their spreading over the prong, and a slider slidable over the second plate-like member to hold said lips in engagement with the under side of the prong, said second plate-like member having said lips normally spaced apart a

distance greater than the width of the prong to facilitate their placement, and being closed together by the slider against the resilience of the slit end of the member.

7. A paper fastener comprising a plate-like member having prongs adapted to be passed through holes in a stack of sheets and then bent over upon the face of the stack, and a second plate-like member having a pair of opposed lips at least at one end adapted to underlie a prong, and being longitudinally slit between the lips to permit their spreading over the prongs.

8. A paper fastener comprising a plate-like member having prongs which may be passed through holes in a stack of sheets and then bent over upon the second face of the stack, and a second plate-like member having channeled sides to receive the prongs and being longitudinally slit at least at one end to give lateral resiliency, and at least one slider slidable over the second plate-like member to hold the slit portion thereof contracted and in engagement with a prong.

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